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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------|
| 09/535,158 | 03/24/2000 | Katsuhiro Aoki | 0557-49331-2 | 1887 |
| 22850 | 7590 | 11/12/2003 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | GRAINGER, QUANA MASHELL | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2852 | |

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/535158

Applicant(s)

Aoki et al.

Examiner

Quana Grainger

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-27, 29 is/are pending in the application.
- 4a) Of the above claim(s) 1-11, 15-25, 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 26 is/are rejected.
- 7) ☒ Claim(s) 13, 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☒ Interview Summary (PTO-413) Paper No(s) 20
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada et. al. in view of the admitted prior art of record. Wada et al. teaches a latent image bearing member 1 having a potential thereon; a developing device 12, the developing device including, a

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conveyor member 2-3 configured to convey the one-component developer from a one-component developer supply anti to a developing region where part of the developer-bearing member is closely spaced next to a part of the latent image bearing member 1, a thin layer forming, device 7 configured to form the one-component developer being conveyed on the conveyor member into a uniform thin layer having a height corresponding to 1 to 1.5 times the diameter of the toner particles of the one-component developer. The development region includes a gap between the conveyor surface portion and the opposed photoconductive surface portion that is equal to or less than about 150 micron.

Wada et al. also teaches as image forming apparatus comprising means for bearing a latent image including image areas and means for applying a developing bias voltage 10 to the means for conveying when the developing operation is performed; the thin layer forming device 7 configured to form the one-component developer on the conveyor member 1 into a uniform thin layer having a height corresponding to 1 to 1.5 times a diameter of the toner particles of the one-component developer (Figures 2-3; column 8). Wada et al. does not teach a two level developing method.

The admitted prior art of record teaches that a two level developing method is conventional (specification: page 1, lines 12-18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the teaching of Wada et al. with an image forming device using a developing method such as taught by the admitted prior art of record to also avoid agglomerates and obtain agglomerates free developer (column 1, line 65 - column 2, line 5).

Response to Arguments

Applicant continues to argue that the admitted prior art of record does not teach what was known conventionally in the United States but what was known only in Japan. The admitted prior art discusses what was known in a printing device and thus what is known wherever the printing device is located and patented. Further, it is clearly not applicant's position that applicant invented two level developing. The admitted prior art of record does not state that applicant is referring only to what is known in Japan. The text communicates what is known to one of ordinary skill in the printing art.

Applicant argues that the location of the teaching of the height of the developer and the gap has not been indicated in the reference. The height of the developer is set by the depth of the grooves and the regulating member and are thus $1/4$ to 3 times the diameter of the developer and is clearly discussed in column 8 and shown in Figures 2 or 3.

Applicant argues that the reference does not teach the toner layer has a height corresponding to 1 to 1.5 times the diameter of the toner particles and this is not the same as the gap spacing of the blade and the final layer thickness. The height of the developer is set by the depth of the grooves and the regulating member and are thus $1/4$ to 3 times the diameter of the developer.

The claims remain rejected as discussed above.

Allowable Subject Matter

4. Claims 13 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

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claim and any intervening claims.


5. Claims 1-11, 14-25, and 28-29 are allowed.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana Grainger whose telephone number is 703-308-7616. The examiner can normally be reached on weekdays between the hours of 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 703-308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.


Quana Grainger
Primary Examiner
Art Unit 2852

QG
October 29, 2003